

INFLUENCE OF MEDIA MESSAGES ON HEALTHY EATING PRACTICES
AMONG FEMALE POSTGRADUATE STUDENTS OF DAYSTAR
UNIVERSITY, NAIROBI, KENYA

by

Naomi Warigia Kahiga

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INFLUENCE OF MEDIA MESSAGES ON HEALTHY EATING PRACTICES AMONG
FEMALE POSTGRADUATE STUDENTS OF DAYSTAR UNIVERSITY, NAIROBI, KENYA

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DECLARATION

INFLUENCE OF MEDIA MESSAGES ON HEALTHY EATING PRACTICES AMONG FEMALE POSTGRADUATE STUDENTS OF DAYSTAR UNIVERSITY, NAIROBI, KENYA

I declare that this thesis is my original work and has not been submitted to any
other college or university for academic credit.

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This work was successfully completed with the guidance and support received from my first thesis supervisor, Dr. Jane Awiti and second thesis supervisor, Mr. Cleophas Mbugua. I acknowledge all those who have contributed greatly to my thesis journey.

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LIST OF ABBREVIATIONS AND ACRONYMS

DFID	Department for International Development
MBA	Master of Business Administration
NACOSTI	National Commission for Science, Technology, and Innovation
NCD	Non-communicable Diseases
UGT	Uses and Gratification Theory
WHO	World Health Organization

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ABSTRACT

This study sought to investigate the influence of media messages on healthy eating practices among female postgraduate students of Daystar University, Nairobi. The researcher gathered data using purposive sampling technique to obtain the desired number of respondents. Stratified sampling ensured adequate representation of students in strata produced from the six postgraduate programs offered at Daystar University. Questionnaires were administered to 90 participants but only 76 respondents filled and returned them. The data collected was analyzed using Statistical Package of Social Sciences (SPSS) version 20. The majority of respondents chose exposure to media (48.7%) since it influenced their use of media in seeking messages on healthy eating practices compared to gender (28.9%) and age (22.4%). In addition, the majority of the respondents strongly agreed that internet ($M=1.82$, $SD=0.890$) was more useful in promoting messages on healthy eating practices compared to magazines ($M=2.01$, $SD=0.959$), television ($M=2.13$, $SD=1.011$), newspapers ($M=2.38$, $SD=0.923$) and radio ($M=2.84$, $SD=1.059$). Furthermore, the majority found satisfaction from the recipe sections in magazines/newspapers ($M=1.78$, $SD=0.888$), internet messages ($M=1.79$, $SD=0.957$), television food adverts ($M=2.09$, $SD=0.926$), and radio messages ($M=2.39$, $SD=1.047$). Additionally, a positive correlation was observed between the types of healthy eating messages and the satisfaction obtained from watching food advertisements on TV. The study recommends that health communicators and journalists develop messages and use the media to disseminate the messages so as to motivate healthier eating practices. Future research could look into exploring the satisfaction obtained from using the internet as a means of communicating messages on healthy eating practices.

DEDICATION

This work is dedicated to my family, my mother Anna Nyambura Kahiga, my father Raphael Kahiga and all my precious sisters and brother. Their love, support, and advice have kept me going throughout my study at Daystar University. To my beloved son Jesse, I dedicate the hard work put in this thesis to you. To all Daystar University staff who assisted me with information relevant in facilitating the compilation of this thesis, I salute you. I also appreciate my friends, Esther Kitemi and Elizabeth Gichobi who supported me emotionally thereby contributing to my successful journey at Daystar University, Nairobi.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

Introduction

The mass media messages are said to influence people in various aspects of their daily lives (Dong, 2010). This happens when images and messages are communicated using media platforms that may influence the behavior, attitude, practices and experiences of the people. Friedman et al. (2009) mentioned that female university students may be flooded with too much information that may arouse confusion and conflict due to an overload of health information. Therefore, according to Dong (2010), there was a need to study how university students respond to those media messages that communicate about healthy eating practices.

Of interest is the growing desire for women to seek health information from multiple media such as books, television, social networks and so forth (Friedman et al., 2009). Some of the health information has been associated with negative influence on young female university students as it has affected their eating practices (Groesz, Levine, & Murnen, 2002). The young female students would respond to what they had read in magazines as they would eat fatty or salty foods. The action affected their health since it led to the occurrence of food-related diseases such as obesity and some types of cancer. Reger, Wootan, and Booth-Butterfield (2002) also indicated that the mass media was used extensively by the food industry in an attempt to influence Americans' eating choices. Therefore, it was an issue of concern globally and it needs to be investigated in a local context. A study into this was useful in enabling researchers to gain insight into the

potential influence that media messages on healthy eating practices may have on female postgraduate students.

Background to the Study

Food and nutrition information can be gathered from media such as television, radio, and also from food manufacturers, health professionals and food labels (Paquette, 2005). These sources may be used to promote messages about healthy eating practices towards female postgraduate students in order to produce sustained behaviors and actions. According to Harris and Bargh (2009) research has proved that in order to eliminate unhealthy eating practices that have been acquired through reading or watching certain media messages, certain mechanisms should be put in place. These mechanisms are the possible solutions to unhealthy eating practices through tailor-making of media messages that communicate the importance of healthy eating practices among other strategies.

In particular, media messages on food advertisements tend to influence the consumer belief patterns and attitudes towards a variety of food products (Dong, 2010). Therefore, it may result in the consumers making decisions based on their perception of those media messages and they may make it part of their eating practices. Tsang (2011) also argued that female university students tend to make their choices based on media messages covering food and nutrition more than any other sources. In this study, the decisions could inform the female postgraduate students to adapt to one or the other practice, which could be categorized as healthy or unhealthy eating practice.

Food products are rated as the most highly advertised media messages on television and other media, with 98% of the advertised foods falling into the category of

low nutritional value (Harris & Bargh, 2009). The reasons were particularly attributed to the taste of healthy foods as the major influence of food preferences and choices among adults (Arcan, Bruening, & Story, 2013). Therefore, adult consumers would go for media messages that promote the taste of foods more than those that don't. This shows that those media messages that promote the taste of foods could be more influential to consumers as opposed to those that don't focus on the taste. Chan, Bech-Larsen, Grønhøj, and Prendergast (2010) also noted that the eating habits and taste preferences tend to develop early in life during childhood and it continues through to young adulthood. Therefore, health communicators could develop media messages that promote the taste of healthier foods in order to produce sustained behavior among female postgraduate students.

It was worth noting that increased exposure to media messages that have repeated and positive messages about different foods had a potential lifelong influence in the eating practices of women (Arcan et al., 2013). If food advertisements endorsing sorghum flour appear on television five times a day for a whole month, the audience would pay more attention to it. However, by capturing the essence of media literacy education in order to defend against negatively advertised messages on food and reducing media exposure to messages on unhealthy eating practice on television, radio, internet, magazines and newspapers could be rendered a lifelong solution (Harris & Bargh, 2009).

There was also need for sensitization on the positive types of media messages that advance the practice of eating healthy. DFID (2012) mentioned positive media messages that encourage the introduction of traditional foods like, cassavas, arrow roots or yams among young adults. The messages challenge the young adults to switch from unhealthy

eating practices to healthy eating ones to minimize food-related non-communicable diseases. Myers (2010) referred to these diseases, which are also known as “lifestyle diseases” as obesity, high blood pressure, diabetes and some types of cancer. Further DFID (2012), noted that the media messages are communicated using media channels such as the social media, comic books, and radio. This was seen as an initiative that promotes positive eating behaviors, experiences, and actions among young adults.

Statement of the Problem

Practically every person brought up in today’s world is flooded with media messages from various sources such as television, magazines, newspapers, films, music, billboards and internet (Abideen, Latif, Khan, & Farooq, 2011). These scholars noted that for over two decades the negative influence of mass media messages has been a great concern to health practitioners, particularly those messages televised, broadcasted and published in print about healthy eating behavior of adults. However, little information is available on the current situation in Kenya regarding media messages that communicate on healthy eating practices. This study attempted to obtain local data in order to reveal the local situation in Kenya as it focuses on Daystar University, Nairobi Campus. It also sought to identify the influence that media messages on healthy eating practices may have on female postgraduate students.

Purpose of the Study

The purpose of this study was to investigate the influence of media messages on healthy eating practices among female postgraduate students of Daystar University, Nairobi.

Objectives of the Study

1. To identify factors influencing the use of media in seeking messages on healthy eating practices.
2. To establish whether media messages on healthy eating practices satisfy the nutritional information needs of female postgraduate students.
3. To find out the types of healthy eating messages which the media provides that promote healthy eating practices.

Research Questions

1. What were the factors influencing the use of media in seeking messages on healthy eating practices?
2. Did media messages on healthy eating practices satisfy the nutritional information needs of female postgraduate students?
3. What were the types of healthy eating messages which the media provides that promote healthy eating practices?

Rationale for the Study

There is little research done on the influence of media messages on healthy eating practices which targets female postgraduate students in Kenya. But much research has been carried out that has captured perspectives from the developed countries. Regional Nutrition Program Team (2009) found that in America, for instance, billions of dollars are spent on the food industry with various health communicators coming up with media messages that appeal to the consumers. They would use social media, social appeals and popular media such as television and magazines, with the intent to gain the loyalty of the

masses. Therefore, these media messages have a way of influencing their decisions about what is healthy and what is unhealthy regarding food.

There is a lot of information from various media, for instance the internet that highlight issues of food. Dong (2010) noted that female university students are bombarded with a lot of media messages and sometimes these messages provide contradictory information about eating. Their exposure to those messages tends to confuse them so they may end up making rush food decisions or even make biased choices based on specific food nutrients. Therefore, in this context, media messages lead to biased decisions about food since the female postgraduate students have experienced information overload. Thus, they choose certain foods with a specific nutrient and forget that all they need is a balanced nutrient level in their bodies. Therefore, the study was useful in finding out the existence and the extent of the problem faced by female postgraduate students of Daystar University, Nairobi.

Significance of the Study

The findings could be useful for health communication researchers and educators as they are better placed in developing media messages, which could induce healthy behavioral changes in response to healthy eating practices. Media messages that are well designed with a view to meeting the nutritional needs of a target audience such as female postgraduate students could yield results. The study could inform the female postgraduate student on the most used media that covers messages on healthy eating practices.

The involvement of the government and private stakeholders in policy formulation could be very important to addressing nutrition issues (Anderson & Nishtar,

2011). Furthermore, the findings would be useful to government agencies that deal with health and nutrition programs to establish mechanisms of communicating messages about healthy eating practices, which produce sustained behaviors, attitudes, practices and experiences. The study would also be useful to the media organizations because it would assist them in developing the best ways to report and frame nutritional messages that target female postgraduate students. Finally, the findings would be useful to both private and public universities since the information could help them improve the food management services offered to students. The information could also help the administration make healthy foods readily available and affordable to university students.

Assumptions of the Study

This study made the following assumptions:

1. That media messages on healthy eating practices had an influence on female postgraduate students. Therefore, it was assumed that they consumed those media messages that could promote healthier foods, thereby producing sustained healthy eating practices.
2. That the media messages were used in pursuit of food and nutrition information and that the female postgraduate students found satisfaction from seeking those messages. Therefore, it assisted them to meet their healthy eating needs.
3. That the female postgraduate students of Daystar University, Nairobi, were consumers of media messages which captured information on healthy eating practices. Therefore, they would be willing to provide honest responses with regard to what the messages provided for them as they met their nutrition needs.

4. That the messages on healthy eating practices were found through the media and that those media sources were commonly used for communicating messages on healthy eating practices.

Scope of the Study

The researcher did a survey using a stratified sample of 382 participants from a target population of female postgraduate students enrolled in Daystar University during the June 2015 Semester. The study was able to identify strata based on the six (6) areas of study under the postgraduate programs offered at Daystar University Nairobi campus. The areas of study were as follows: Master of Arts in Child Development, Master of Arts in Community Development, Master of Arts in Monitoring and Evaluation, Master of Arts in Communication, Master of Arts in Counseling Psychology, and Master of Business Administration.

The major areas of study captured various areas of specialization. The Master of Arts in Communication program offered the specializations in corporate, development, and electronic communication. In addition, the Master of Business Administration program offered the specializations in finance, marketing, strategic management and human resource management. Master of Arts in Child Development program offered family studies as a specialization with the rest of the courses compulsory. The Master of Arts in Monitoring and Evaluation specialized on program monitoring and evaluation. The participants of this study were purposively selected using the snowballing approach in order to obtain the adequate representation of participants from each of the six program areas. Therefore, this study obtained a sample of 76 participants.

Limitations and Delimitations of the Study

The study focused on Daystar University where the researcher was pursuing a Master of Arts in Communication. Therefore, the researcher delimited this and minimized on bias by ensuring equal representation from all the six program areas which are: Master of Arts in Child Development, Master of Arts in Community Development, Master of Arts in Monitoring and Evaluation, Master of Arts in Communication, Master of Arts in Counseling Psychology, and Master of Business Administration (MBA).

Definition of Related Terms

1. Influence: Chandran (2004) defined influence as the ability to move in someone else's beliefs and actions. In this study, influence has been used to refer to how media messages on healthy eating practices have the power or ability to affect the beliefs and behaviors of female postgraduate students.
2. Female postgraduate Students: These are women who pursue higher education at masters' level and different scholars have expressed varied views about their age. Magano (2011) stated that in South Africa postgraduate women are usually between 35 years and above. Meti (2014) also observed that 30 percent of postgraduate students were under 25 years of age, whereas 7 percent are between 31-35 years of age. In this study, female postgraduate students are women who pursue higher education at masters' level in Daystar University. The youngest age to enroll for a Master's program was 23 years.

3. Food-related diseases: According to Harrigan and Park (1991), food-related diseases arise from food contaminated by microorganisms. In this study, food-related diseases referred to diseases that occurred due to the consumption of contaminated foods.
4. Healthy eating messages: They are defined as those messages that promote the consumption of core foods such as fruits, vegetables, and right proteins in the diet or to those messages promoted in the media in relation to advertised food products (Andrews, Jones, McVie, Tapsell, & Williams, 2008). In this study, healthy eating messages are those messages provided by the media in order to promote the consumption of healthier food products.
5. Healthy eating practices: According to World Health Organization (2015), a healthy eating practice is an act of making healthier food choices. To make healthier food choices, one is required to include, vitamins and minerals (fruits and vegetables), right proteins (like legumes and whole grains) and, carbohydrates (low fat and sugars) into his/her diet. In this study, healthy eating practices are the acts of inclusion of proteins, carbohydrates, vitamins and minerals into one's diet.
6. Media-based campaign: DeJong (2002) indicated that media campaigns are used in order to create awareness about a certain societal issue, for instance, right food choices for women. In this study, they are used to create awareness about the existing health eating interventions and media-based campaigns.
7. Media messages: This refers to media content disseminated to audiences such as female postgraduate audiences through newspapers, magazines, radio, TV and internet as media sources (Communication for Governance and Accountability

Program, 2012). In this study, media messages refer to the content written or published about healthy eating practices.

8. Multiple media: These are books, television, social networks, bulletins and many other (Friedman et al., 2009). In this study, messages on healthy eating practices are communicated to female postgraduate students using multiple media.
9. Non-communicable diseases: These are diseases arising from poor diet, lack of physical activity, eating disorders, and much more health risks factors (Roses, 2011). In this study, non-communicable diseases are mentioned as consequences of unhealthy eating lifestyle.

Summary

This chapter presented the introduction and background to the study. It also provided the research problem and the purpose of carrying out the study. It further presented the objectives of the study, research questions, rationale and the significance of the study. It also presented the assumptions and mentioned its scope of the study. It highlighted the limitations and delimitations of the study.

The following chapter captures the various literatures reviewed in relation to the objectives of this study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter provides information based on literature reviewed on the influence of media messages on healthy eating practices among female postgraduate students. The literature review covers the three research objectives, namely to identify the factors influencing the use of media in seeking messages on healthy eating practices, to establish whether media messages on healthy eating practices satisfy the nutrition needs of female postgraduate students and to find out the types of healthy eating messages which the media provides that promote healthy eating practices. This chapter also presents the theoretical and conceptual framework relevant to the study.

Theoretical Framework

This study was guided by the uses and gratification theory. Luo (2002) explained the behavior of users as they interacted with a certain medium in their pursuit for information. Their pursuits arouse the users' drive or desire and influenced their decisions towards that particular media message. This theory focused on the explanations of audience motivation and associated behaviors. A fundamental assumption of the uses and gratification theory is that users are actively involved in the use of the media and they highly interact with that communication medium.

In reference to this study, the theory assumed that female postgraduate students were actively involved in the use of media and that they interacted with magazines,

television, radio and internet as sources of healthy eating practices. It further explained that female postgraduate students were motivated to seek for messages on healthy eating practices, which could be based on their drive or interest for those messages.

Luo (2002) further stated that the uses and gratifications theory (UGT) was formulated from the functionalist point of view on mass media communication. It was first used in research on the effectiveness of radio as a medium of communication in the 1940s. Psychologist Herta Herzog (1944) created the term gratifications to describe the usage satisfaction of radio audiences. The three components and relevant factors that make up the uses and gratification theory consist of the antecedents which are; entertainment, informative and irrational. The second component was the attitude of the medium used and thirdly, the possible consequences of using the medium, i.e., satisfaction. In this current study, media messages on healthy eating practices could be thought of as informative since they are specific to the target audience, who are female postgraduate students. However, they could have varied attitudes towards the medium or the message that they want to interact with. The third component looked on the possible consequence of using the medium and whether the respondents found satisfaction from using the medium or the messages.

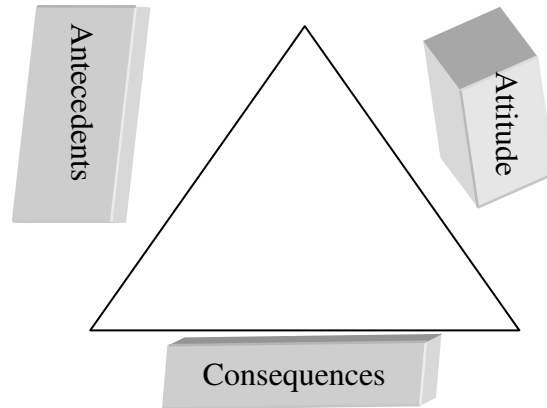


Figure 2.1: Explains the Three Components of the Uses and Gratification Theory
Source: Luo (2002)

Mass communication theorists applied the uses and gratification theory point of view in the context of various mass media, for instance, television, magazines, and electronic bulletins. Researches done on the uses and gratification theory were quite productive. This was because they had built on an understanding of the consumer, their stimulations, and their concerns for using the media. Ruggiero (2000) referred to other studies that applied uses and gratification theory in their pursuit for media messages. Some involved Cantril and Allport in 1935 that focused on the radio audience needs and gratification; whereas studies by Waples, Berelson, and Bradshaw (1940) which focused on readership. Also, Herzog in 1940 and 1944 applied uses and gratification theory while studying quiz programs and the gratification from radio daytime serials. Suchman of 1942 studied the motives for listening to music; Wolfe and Fiske in 1949 applied UGT on children and their interest in comics. Finally, Berelson (1949) applied it to find out the functions of newspaper reading. In conclusion, these studies were either bringing out the gratifications found in some specific content or specific medium.

This study had a similarity with the studies mentioned by Ruggiero (2000) since they explained the stimulations and interests of female postgraduate students' while they sought for media messages on healthy eating practices from media sources. The gratifications might be considered with regards to the specific content that captured relevant information on healthy eating practices and whether the audiences found gratification from them or not. Therefore, the theory was appropriate for this study since it brought out the gratification found in using media with healthy eating content that female postgraduate students could relate to.

General Literature Review

To Identify Factors Influencing Use of Media for Seeking Healthy Eating Practice Messages

To effectively understand how media is used as means to seek for messages on healthy eating practices, there is a need to investigate the factors that influence female postgraduate students from seeking those messages. Some of these factors include; age, gender, with specific consideration of women and the exposure of mass media.

Age Factor

Elliot, Smith, Swanson, and Topping (2010) mentioned that the average age of those females who pursue postgraduate courses are 31 years old. However, in this study, it was important to consider those who are under 25 up to 50 years. This was so since according to the registrar's office at Daystar University some students would enroll at 22 years for postgraduate courses immediately after completing their undergraduate courses.

It could be said that a sample of younger and older university students presents a balance. It was also useful in gathering information for influencing effective health

campaigns (Van Vonderen & Kinnally, 2012). According to Jade (2009) older female consumers tended to utilize more print-based media compared to younger ones who are more likely to utilize other sources of media messages such as the internet, radio, and television. The older female consumers appeared to be more conscious about their nutrition since they were inclined to information that helped them maintain their healthy lifestyles. Therefore, they would seek for information on eating healthier foods from magazines and feature stories from newspapers to gain more knowledge that could lead to sustained behavior change.

Avni (2009) found that internet was more popular with the young adults between ages 18-30 years. The young adults would frequently visit social networking platforms such as Facebook because it gave them numerous messages about healthier eating practices and behaviors. Ritland (2013) added that younger people tend to use the internet more compared to older people who would use television instead. This was because television was their most preferred tool since it assisted them in seeking for resourceful nutrition information. Beaudoin and Hong (2011) also found that the internet was highly used than all other media as it was the primary source of health and nutrition information. Therefore, in this study, the age factor was significant since it could inform the researcher how younger and older female postgraduate students interacted with media while they sought for messages on healthy eating practices.

Media Exposure and Use

Media has been cited as the most important factor in the adoption of eating practices and behavior change in women (Avni, 2009). In this context, the media is viewed as the most significant factor to consider, particularly in reference to how

messages on healthy eating practices are made and disseminated to female postgraduate students. Park and Reber (2010) also agreed that the media were the most important information channels which transmitted resourceful nutritional information to the public and delivered current information on that matter. Reger et al. (2002) suggested that mass media approaches should be used in order to promote healthier eating behaviors and habits that could target a significant group of adults. These mass media approaches can only work if they are used in conjunction with other health education programming. From the views of Reger and other contributors, the statement meant that mass media alone could not yield the results required from an intervention that aimed to change the eating habits of female postgraduate students.

However, Beaudoin and Hong (2011) concluded that media exposure as an independent resource could lead to the change of eating patterns and behaviors which could yield significant results. The change could be categorized as healthy or unhealthy, for instance, one could adapt to eating fresh fruits and vegetables daily or adapt to unhealthy snacking of junk food products. This implied that media use and exposure were powerful influences on eating behaviors and practices.

Badshah, Farooq, Hifazatullah, Dar, and Hamdani (2012) made reference to the use of modern media as a tool for informing, educating, entertaining and advertising various societal issues. Despite this fact, some people considered media as only a tool for entertainment, whereas the vast majority would consider it appropriate for offering media messages regarding food through advertising. Choi and Kim (2011) agreed that mass media provided advertised messages on the best foods sold in supermarkets and in various establishments. Therefore, media exposure could provide messages to consumers

who are spoiled for choice because they could easily buy cheaper foods from an assortment of healthier foods in the market. In this context, the mass media messages seemed to influence the consumer choice as they purchased the healthier foods.

Avni (2009) indicated that university students selected media with a reason. For example, the internet provided them with the connectivity to all social networking platforms such as Facebook and Twitter which provided them with necessary information about healthy eating practices. Facebook also offered them a variety of information about food and nutrition, and therefore, they could easily find the right information as they met their preferences and needs. In this study, media exposure and use were important in defining the kind of messages female postgraduate students sought for, in relation to healthy eating practices. The reason they chose certain media sources could be attributed to their daily or weekly interactions to the medium itself and what satisfaction they gained from the medium or message.

Gender Factor: Specific Consideration of Women

Gender has been seen as a significant factor pertaining to the eating habits and food choices of women (Dutta-Bergman, 2009). In this context, women are viewed as the most likely people who eat healthier foods as compared to men. This was because they appeared to be more involved in making food choices for themselves and their families. Dong (2010) established that women were more knowledgeable and had a broader perspective of food health values as compared to men. Cohen (2006) commented that the likelihood of women comparing themselves to what they read from magazines was higher than in men since it influenced their attitude and beliefs about eating. Therefore, specific

consideration of women was important since women were more inclined to consider healthier eating practices as they sought for more knowledge about food.

Jade (2009) argued that print and broadcast media were major sources of information on health. Older female consumers used print-based media such as newspapers and magazines more than younger female consumers as they sought for healthy eating practice information. This was seen when younger female consumers made use of other alternative media such as the internet, radio and television as they sought for messages on proper nutrition and eating practices. According to Dong (2010), even though, women were perceived to have more knowledge about healthy eating in comparison to men, it was observed that women felt that messages from the media were confusing and offered conflicting information. The confusion and conflict arose since they had experienced information overload due to numerous media messages that existed. This information could be about how and what to eat, what is healthy or bad for human consumption and so forth.

Condrasky, Duhe, Evans, and Tanner (2008) agreed that women were faced with life challenges that made it difficult for them to decide on the best eating practices for themselves and their families. However, even with these challenges they still found time to include healthier foods into their diets. In addition, women would adapt to eating practices which were found in certain types of media that had a bias for nutrition messages advocating for certain tastes and nutrients. This could also be misinformation since the media messages had not been fairly looked into ascertain whether they were good for the advancement of healthy eating as a practice.

University women increase in weight can be as high as 0.75 kg/month, which is significantly higher than working women of the community who are of the same age (Ferrara, 2009). This happened because university students were easily exposed to potential lifestyle changes which were acquired from media messages which promoted certain images or nutrition practices. The media messages communicated that certain body weight or postures were the most ideal for women. Of course, these messages influenced their perception and beliefs about eating as a result, they were susceptible to food-related diseases. Elsewhere, Dong (2010) revealed that female university students had a special concern about eating healthier foods since the media offered them a lot of information which could help them make independent choices about their nutritional values. Therefore, in this study, female postgraduate students were under focus since they could inform the study based on their views about media messages on healthy eating practices.

Other factors influencing the use of media in seeking healthy eating practice messages include; personal, social and cultural factors. This could be experienced when people sought for media messages about food in relation to their social statues and sense of belonging in the society (Verstraeten et al., 2014). Moreover, the social and cultural factors were influenced by issues to do with the cost of foods, taste, and weight control (Deshpande, Basil, & Basil, 2009).

To Establish Whether Media Messages on Healthy Eating Practices Satisfy Nutritional Information Needs.

The world has evolved and now people have better access to health information available through online and traditional media sources (Ritland, 2013). It was observed that media has become the means by which health and nutrition messages are communicated to people of all backgrounds (Brunner, Fowlie, & Freestone, 2011). In this context, media includes much more than traditional mass media, which are, newspapers, magazines, television, and radio. Additionally, they include online news sites and social media such as blogs, Facebook, and Twitter, as well as electronic mail and electronic alerts. In this context, media is said to appear in both traditional and online platforms, thus useful instrument for communicating messages on healthy eating practices to the female postgraduate students.

In some instances, there were challenges faced as people sought for media that communicated messages on healthy eating practices especially if a person sought to find satisfaction for their nutritional values. Tsang (2011) agreed that female postgraduate students were mature adults who were faced with practically all sorts of life pressures, which could later have an effect on their attitudes about food. They are bombarded with nutrition information from the media, which at times, could be too much to grasp because of information overload. However, this does not deter them since they could filter through the information overload and find media messages, which might satisfy their nutrition needs.

Chamberlain and Madden (2010) also concurred that a lot of media based campaigns have the capacity to provide messages, which might appeal to women's

nutrition's needs, but instead offers information that confuses their thinking about healthy eating practices. In this context, the media based campaign may not necessarily benefit female postgraduate students, if the messages are misleading and confusing about healthy eating practices. Therefore, a simpler approach could be used to ensure the information satisfy their nutritional needs. Blanchard and Mask (2011) further mentioned that the misleading and confusing media messages were as a result of how they were framed and their purpose. For instance, messages depicting slim model images and their type of nutrition could easily mislead the readers or viewers because they would copy the pattern. The result of such messages might affect their food choices, therefore yield unhealthy eating practices among female postgraduate students.

How could media messages on healthy eating practices satisfy female postgraduate students nutrition needs? Harris and Bargh (2009) recommended the use of social marketing programs that maximized on television use and other forms of media since they provided messages that advocated for increased consumption of healthier foods such as, vegetable and fruits. Moreover, it is perceived that the most effective messages were those that focused on one particular intervention, that is, messages, which encouraged female postgraduate students to switch from one practice to a healthy eating practice.

Reger, Wootan, and Booth-Butterfield, (2002) also found that media interventions are ideal for producing a sustained change of behaviors, patterns, and actions among women. These media interventions should provide simplified information. Furthermore, they should also be designed with the target audience in mind since health communicators and nutritionist can better understand them. This approach could be better

since the respondents would meet their nutrition needs easily. In this context, the media messages were designed to cater for a change in food diet, by encouraging the adoption of one food product in order to achieve healthy eating practices among female postgraduate students. Previous studies by Dong (2010) have shown that the majority of female university students preferred simplified information because it could help them eliminate, if not minimize information overload. In this context, it was said that little, but relevant information spoke volumes compared to having too much information, which bared unnecessary messages.

Besides, health communicators responsible for designing media messages, which were target conscious with the aim to satisfy nutrition needs of consumers (Chang, Chang, Huang & Hung, 2009). This approach was planned since the target audience was known. Therefore, it made tailoring of media messages easy as one intervention was identified in order to yield significant results. Reger et al. (2002) mentioned that one had to identify what these nutrition needs were so as to address them while tailoring the media messages. Tsang (2011) also agreed that tailoring of media messages for female postgraduate students was crucial for health communicators because the messages were specific and target a specific nutrition issue.

In addition, Harris and Bargh (2009) noted that media messages promoting the taste of healthy foods were more effective compared to those just emphasizing on nutritional values only. In other words, messages tailored to capture the element of the taste of healthy foods were appealing to the respondents. As a result, the media messages on healthy snacking were slowly becoming popular on televisions, newspaper segments, and magazines. In conclusion, Ciliska, Krishnaratne, Lewis, and Yost (2010) described

media as significant, in the sense of creating and disseminating messages which brought about a desirable behavior change. In this study, it could be understood as the change from unhealthy eating to healthy eating practices among female postgraduate students.

To find out the types of healthy eating messages which the media provides that promote healthy eating practices.

A lot of health and nutrition information could be accessed from online and traditional media such as the internet, television, newspapers and so forth (Ritland, 2013). The health and nutrition messages, media holds were said to be powerful and they impacted into the lives of people (Swansea, 2010). In this context, media was the carrier of messages which communicated nutritional health information to female postgraduate students.

Clarke, Evans, and Hovy (2011) highlighted that tailoring was one of the strategies health communicators used to design different types of healthy eating messages passed through the media. Hence, health communicators' advocate for media messages that could positively change behavior or practice. Chang et al. (2009) argued that tailoring media messages to capture nutritional information was the most effective approach and bared tangible solutions to those who sought them. Furthermore, Avni (2009) also established that tailored media messages for young adults provided them with necessary information and skills in handling their diets. In this context, the young adults were aged 18-30 years and they were pursuing their university education. Thus, in response to the influence received from consuming those messages, it has enabled them to make healthy choices.

From effective media messages on healthy eating, sustained behavior, attitude, and practice were achieved (Regional Nutrition Program Team, 2009). These types of healthy eating messages provided by the media might increase the interest of female postgraduate students. They could also get involved since they had the information, thus, make appropriate decisions about food. Friedman et al. (2009) stated that specific types of healthy eating messages provided by the media tend to produce better results, since they target specific people. Nevertheless, Avni (2009) argued that young adults were able to critically scrutinize media messages that influenced their opinion and practices about healthy eating. Based on these studies, young people tend to recognize the power of the media and the messages they hold on healthy eating practices. Thus, they could critically analyze its contents. In this current study, we focused on the types of healthy eating messages which were provided by the media and promoted healthy eating practices. These were healthy eating messages on food advertisements, brain health, weight loss, and obesity.

Healthy Eating Messages on Food Advertisements

The majority of the advertisements were for food products. Harris and Bargh (2009) noted that food advertisements were media messages used to promote healthy eating practices. Advertised food media messages could lead to either positive or negative eating behaviors or practices. In this context, media messages on advertised food products which contain information on healthy eating practices might result in healthy, sustained eating practices. On the other hand, media messages designed for promotion of the brand without consideration of the consumer preference and needs might produce unhealthy eating practices.

According to Choi and Kim (2011), a heated debate arose between the United States of America and Europe concerning the regulation of health claims consistent with food advertisements and featured articles on unhealthy food distribution. They claimed that media was to blame for offering bias towards commercials from selective food companies, which advance their self-interest through harmful food advertisements. In this context, the messages were deemed harmful to human health since they were misleading and not well researched on to suit the interest of the public. Avni (2009) cited that media messages from food and beverage advertisements could sometimes have a persuasive effect. Most often than not, these messages contained misleading information or incomplete facts resulting in confusion among young adults. Choi and Kim (2011) stated that contrary to olden days, fruits, vegetables, plants and seafood were known to be medicinal in nature and were not exposed to harsh chemicals, high fat heating, and cooking. However, in these present days, most media messages on advertised food products appealed to consumers and attempted to persuade their food choices.

Harris and Bargh (2009) found that most of the effective media messages on advertised foods are those that increase the consumption of healthy foods since they aim at promoting the taste of healthy foods, rather than its nutritional value. On the other hand, Reger et al. (2002) argued that advertising and news stories pose a challenge in promoting complex food products and they become less effective. In this context, for instance, promoting the increase in consumption of whole grains was not an easy task since it would first require advocacy efforts. The reason was that whole grains supply should be available and in variety in a restaurant, grocery shops and other food established. This exercise would eventually render advocacy effort fruitful; thereby

influence eating habits, behaviors, and experiences among older females. In a nutshell, Chan et al. (2010) recommended that there should be properly designed food advertisements which promote healthy foods consumption, in the long run, facilitate healthy eating practices in people.

Healthy Eating Messages Covering on Healthy Foods for the Brain

Healthy eating messages on brain health were crucial in this day and age. Friedman et al. (2009) conducted a study and attempted to establish the relationship between healthy eating messages and their effect on brain health among older adults. The study revealed that media messages from television and radio, which contained information on healthy eating practices significantly, influenced their knowledge about brain health. Furthermore, Friedman et al. (2009) also noted that those media messages recommending healthy and balanced diet, specifically including fish in the diet yielded better results. This was because the respondents took up the recommendation and practices it thus improving their memory. In this context, messages about the usefulness of fish in the diet were captured on television and magazines' content. The relevance of this was seen in the way media messages on healthy eating practices influenced the habit of older and younger people.

Healthy Eating Messages on Weight loss.

Healthy eating messages on weight loss and obesity could be said to improve attitudes or practices of the female university students. The portrayal of messages on television and magazines about obese people being lazy and carefree has increased stigma (Harris & Bargh, 2009). In this context, the writers proposed for media messages which could enlighten the public about the causes and treatment of obesity to reduce

stigma. Van Vonderen and Kinnally (2012) argued that women who were heavy viewers of media with thin-ideal messages had a misconception that being thin was socially acceptable and being obese was bad. Hence, they would engage in ill weight loss practices such as eating little and consisted vomiting of food, thereby indulging in unhealthy eating practices all just to fit into media proposed standards. The effects of the unhealthy eating practices were devastating since they attributed to food-related non-communicable diseases such as high blood pressure, some cancer, obesity, and diabetes.

It was also noted that young women tended to compare themselves to what they read from magazines. They would compare their weight with the images of the ones appearing in the magazines (Groesz, Levine, & Murnen, 2002). These images affect their attitudes and beliefs towards obesity or overweight, leading to poor weight loss programs. Van Vonderen and Kinnally (2012) also added that these media messages affect their perception negatively. On the other hand, Harris and Bargh (2009) suggested that media messages could be used to communicate the importance of eating healthy foods to curb obesity in the long run.

University female students in the developing countries had also been affected negatively since they had interacted with media messages proposing slender body images. The female students would go to whatever length to lose weight, causing some to fall sick in the process of starvation (Khan, Khalid, Khan, & Jabeen, 2011). However, ideal media messages encourage healthy ways of losing weight by insisting on the inclusion of healthy foods such as fresh fruits, vegetable and right protein (Khan et al., 2011). In this context, it was viewed that appropriate weight loss programs yield better results as it also helps participants improve their health.

Healthy Eating Messages found in the Journalistic Works by Clinical Nutritionist Sona Parmar Mukherjee.

This study highlighted some journalistic works of a clinical nutritionist known as Sona Parmar Mukherjee, who writes for the Daily Nation newspaper and the weekly Saturday magazine. Sona had an experience in Corporate Communications and she was a qualified Clinical Nutritionist (Sona, 2012). Her studies recommended prevention using nutrition in knowledge and practice. Some of her journalistic works were the Saturday magazine for the Daily Nation and the Living Magazine every Wednesday. Her work was chosen because it represents the local media messages that exist in the African context to give insight about the benefits of healthy eating practices in curbing weight issues in women.

This study reflected on her contribution to the types of healthy eating messages women could find beneficial in cultivating healthy eating practices. In her article on health and nutrition, dated *Saturday* 24th January 2015, she argued that a woman was seen as her worst enemy because she entertained negative thoughts and emotions about her own body acquired from what she consumed in media messages. It leads to poor eating practices since the reader or viewer compared herself to the images and messages portrayed.

Furthermore, Sona described women as easily drawn to something that later became their daily practice. In her article, dated *Saturday* 7th January 2015, women had a tendency to search for information that could help them find solutions to preparing healthy meals. However, confusion might arise from information overload since they

might not know how to filter information. She recommended that they should go for media content that proposes healthy meals to comprise of half vegetables, a quarter protein, and a quarter carbohydrates. In addition, her article recommended them to eat balanced diet that were close to nature to create a taste and desire for eating healthy foods, at all times.

Empirical Literature Review

To Identify Factors Influencing Use of Media for Seeking Messages on Healthy Eating Practices

This section looks into empirical literature which may reflect the studies done related to the objectives of the study. It seeks to document previous research studies that explain the factors influencing the use of media for seeking messages on healthy eating practices.

Age Factor

Meti (2014) conducted a study on the pattern of internet use among postgraduate students of Gulbarga University. The majority of the respondents captured in the study were between 26 and 30 years. The observations showed that 30 percent of the respondents were less than 25 years whereas 7 percent were between 31-35 years. Moreover, Beaudoin and Hong (2011) conducted a study in 2007 which was carried out among Americans aged 18 and older and it captured a population of 700 adults. The findings showed that 62% of women and those with higher education (postgraduate level) were more inclined to seek for nutrition information on the internet. Also, 64% said that they sought for health and nutrition information from television while newspapers also featured among older, highly educated women.

Elsewhere, Avni (2009) carried out a study where questionnaires were distributed to many young adults across the world between September 22 and October 15, 2009. They were distributed through email and Facebook. The study aimed at finding out the influence of the internet and the pursuit for healthy eating messages among young adults. The intervention used established that the young adult aged 18-30 years, who frequently used the internet found satisfaction in seeking healthy eating information.

In addition, healthy eating practices were suggested to take productive effect in childhood stage rather than during adulthood stage. Harris and Bargh (2009) findings on the study carried out to investigate on the relationship between television and unhealthy eating supported their hypothesis. The hypothesis was on television viewing in children and adolescence and its ability to predict unhealthy diet in early adulthood. According to the studies the results showed that indeed there was a relationship between early television viewing and unhealthy eating in childhood and adolescence. It also showed that if the foundation was right it was replicated into early adulthood while they are in universities.

Gender Factor: Specific Consideration of Women

In the study done by Avni (2009), questionnaires were administered to a total population of 352 young adults from a university. Out of the 352 young adults, 181 were males and 168 were females. It was observed that there was adequate distribution between the genders because the percentage showed that 51.8% of males and 48.2% of females was obtained. Then the study further narrowed down the research to 100 respondents. Out of 100 respondents who said that they directly interacted with the media messages on advertised foods; 55% were male and 45% were female. Even though, the

percentage difference was small between females and males, both gender interacted significantly with the media messages. Questionnaires were distributed to many young adults across the world between September 22 and October 15, 2009. They were distributed through email and Facebook. The study aimed at finding out the influence of the internet and the pursuit for healthy eating messages among young adults. The results showed that female students had more interactions with Facebook as a medium of choice for seeking healthy eating information compared to male students.

Media Use and Exposure

According to Jade (2009), nearly 95% of people living in America possess television sets in their homes and they watch for an average of 3-4 hours per day. In addition, over 60% of men and 50% of women read a newspaper a day, making it a preferred type of media. Furthermore, nearly half of all girls starting age 7 have access to a girls' only magazine each week. Girls and women of all age groups prefer magazines since magazines cover messages on lifestyle issues, such as food recipes, fashion, cooking tips and many more. The significance of this was seen in how women in today's world interact with the media on a day to day basis compared to the men.

Moreover, internet technology has made its way into the world economy by offering solutions to all universal questions. This has made women seek for information on healthy eating practices that can better their personal lives and other people's lives. Meti (2014) noted an increase in the use of the internet technology among postgraduate students of Gulbarga University because internet had become a useful source of a medium which educates and informs on various life issues. It was observed that nearly half of the students used the computer labs provided in the school premise. On the other

hand, 28% made use of Smartphone, while 9% used their own laptops to access the internet.

Furthermore, Avni (2009) found that an intervention was designed for young adults. Out of 31 respondents, a proportion of 38.7% of the respondents were females and they stated that at least one food product intervention influenced their behavior towards healthy eating. The intervention was found effective since it used existing social network platforms such as, Facebook and Twitter, which was popular among young people. In addition, before the intervention was introduced young adults consumed few fruits; vegetable and rich-calcium products, instead they consumed foods with high fat and sugar content. However, with the intervention on Facebook and Twitter 9.4% of them, admitted having bought healthy food products, which were advertised on Facebook.

To Establish Whether Media Messages on Healthy Eating Practices Satisfy the Nutritional Information Needs

This section documented those studies that could shed light on whether media messages on healthy eating practices satisfy the nutrition needs of female postgraduate students. According to Ritland (2013), some statistics found from a National Health interview survey showed that 45.6% of adults above 18 years sought for health information on the internet. This was because they found satisfaction in using the internet as the source of those messages. However, it was also observed that 44% of the participants believed that doctor-patient communication was influential to them. This was attributed to the fact that much older participants found doctor-patient communication to be the most reliable compared to other means.

In Ritland's (2013) study, it was also observed that 59% of the participant believed that Google searches offered very reliable messages, whereas 22% of them found that Google searches were influential since they contained influential messages on health and nutrition. Based on her study, over time doctor-patient communication are becoming rare, thus making mass media the primary source of health and nutrition information. Avni (2009) affirmed that health statistics on food and nutrition were commonly available to health professionals and the public through the internet. This motivated investigators into exploring the channel's power to promote virtual communities by enabling women with common health and nutrition information needs to sustain online presence.

Another study was carried out to establish whether female consumers found satisfaction from the media content they consumed on healthy eating and if the messages were adequate (Dong, 2010). The results showed that females' university students believed that there were inadequacies of health messages, which could provide adequate knowledge on matters to do with the nutritional information. However, Reger et al. (2002) expressed that mass media was sufficient enough to meet the nutritional information needs of a person and a community. It was capable of promoting a positive change of attitude, behavior, and even practice. In this context, mass media was said to hold sufficient information about food and capable of promoting healthy eating practices.

Elsewhere, Dong (2010) observed that the amount of health information correlated with change of eating behaviors whereby women adapt to eating healthier food. In this context, there was a significant relationship between health knowledge and health behavior change. The explanation was that with an increase in knowledge about

health then, there is an improvement in the eating behaviors of women. Reger et al (2002) also found that an intervention which targeted a change in eating behavior was well received by the respondents. They stopped consuming milk that was high in fat and embraced milk with low-fat content. They expressed their satisfaction to the new product since they did not go back to their previous ways.

To Find Out the Types of Healthy Eating Messages Provided by the Media that Promotes Healthy Eating Practices.

This section provides the empirical studies documented on the types of healthy eating messages provided by the media which can be used to promote healthy eating practices.

Healthy Eating Messages on Food Advertisements

Nadeau (2011) found out that food advertising is most popular in the media since it allows its viewers to make use of both visual and auditory environment. In this study, these messages captivate female postgraduate students and forms their perceptions and attitude towards healthy foods. According to Bell, Berger, and Townsend (2003) studies that investigated on the use of television programming revealed that television is saturated with advertisements. Almost 98% of the advertisements concentrate on food and nutrition. The reason was that these messages were usually intentional, focused, and persuasive in nature since they could alter the attitudes and behaviors of consumers. Friedman et al. (2009) found that food commercial messages were popularly used among older adults aged 40-60 years. They cited that they were more informed about healthy

eating practices from television since they understood the practice was important for brain health.

Healthy Eating Messages for Brain Health

An investigation was carried out to find out how and where older adults aged 40-60 years old got their information about brain health. From the findings, a participant of Chinese orientation stated that a lot of her information was from the media (Friedman et al., 2009). She continued by saying that she got the media messages from watching television and reading magazines for the Japanese community. The messages indicated that Japanese people lived longer because they ate a lot of fish. Therefore, fish was attributed as the major determinant to healthy eating practice among older respondents since it promoted brain health.

In addition, other participants, including an American Indian also mentioned that a lot of messages about eating fish as a healthy practice was reported and published through the media (Friedman, et al., 2009). The same was observed by African American participants since they mentioned salmon as a specific type of fish that was very useful to brain memory. This message was acquired from reading magazines. In conclusion, the messages were found in the media and they held specific messages on brain health for older adults. They were also able to make an informed decision about their health and prevent memory loss.

Healthy Eating Messages on Weight loss.

In 2009, a study that aimed at quantifying the nature and extent of media messages on food advertisement was carried out. It examines 137 issues of 12 popular magazines published for women (Dong, 2010). The method used was content analysis in

order to examine advertising frequencies of foods classified by food groups and why the messages attracted women. It was also observed that media messages that associated food consumption to weight loss among young female university students showed a correlation. Out of 550 young female students, 45% indicated that their motivation to lose weight was inspired by magazine messages that factored on the need to improve their eating practices. In her study, female university students associated weight loss with food consumption since women tend to focus more on their weight. Therefore, women strive to initiate weight loss activities compared to men.

Among female college students in the United States, 39% of them who had normal weight stated that the media was a source of pressure for them to be in a certain body weight (Khan et al., 2011). This finding was of public health concern because female university students developed unhealthy eating habits that affected their weight, for instance restricting their food consumption with an aim to achieve what the media messages proposed.

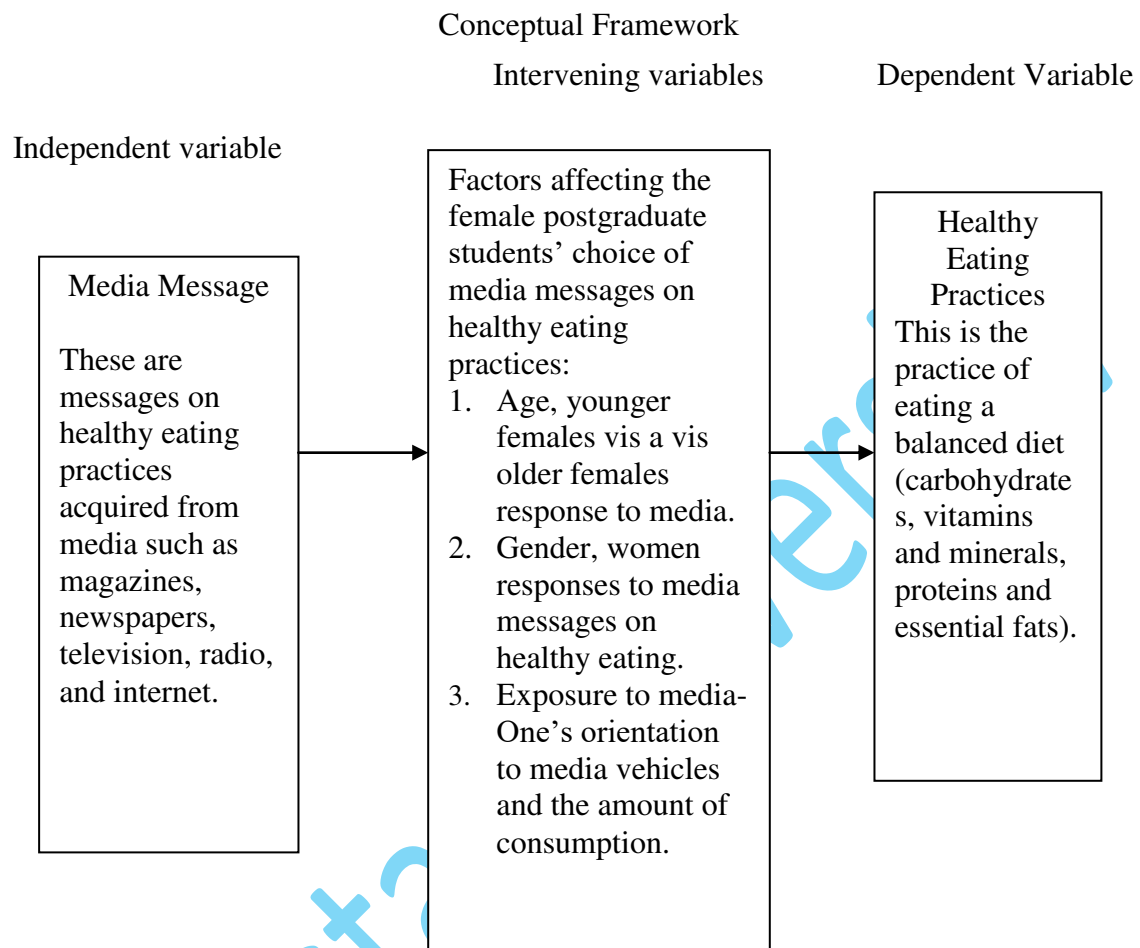


Figure 2.2: Conceptual Framework.
Source: Verstraeten et al. (2014)

The above conceptual framework illustrated how media messages have an influence on the healthy eating practices of female postgraduate students. The conceptual framework was adopted from Verstraeten et al. (2014). It can also be related to Fjellstrom, Lundkvist, Lumbers, Raats, and Sidenvall (2010) study that showed respondents used in the study describing how the media influenced them to change their diet, because of health related issues. It was observed that as they read and listened to the

mass media, they were able to apply the information, and reduce their salt intake drastically; while increasing their fiber intake.

In this current study, the conceptual framework captures the independent variable as the media messages, the dependent variable as healthy eating practices, and the intervening variable as the factors influencing the female postgraduate students' choice of media messages on healthy eating practices. Therefore, the independent variables included television, radio, newspapers, magazines and internet. In addition, the dependent variables included healthy eating practices such as eating foods rich in carbohydrates, proteins, vitamins and minerals. Likewise, the intervening variables were the factors affecting the choice of media messages on healthy eating practices such as age, gender and frequent exposure to media. The intervening variables sought to explain the relationship between the two observable variables, that is the independent and dependent variables. The study sought to find out whether these factors influenced the respondents to use a specific medium which contained messages on healthy eating practices.

The conceptual framework was appropriate for this study because it connected the independent variable and dependent variable to show a relationship. In this context the media messages affected or caused change on the healthy eating practices of female postgraduate students. The change could be categorized as positive or negative depending on the respondents reaction to the media messages consumed. The intervening variables were used to determine the eating practices of female postgraduate students based on their ages, gender or frequent exposure to media messages on healthy eating practices.

Other similar conceptual frameworks included; one presented by (Verstraeten, et al., 2014). They have developed a conceptual framework around healthy eating behavior

in Ecuadorian adolescents. The model explained that the eating behavior of adolescents was influenced by a perceived environment, and factors that reflected ones' personal, social and cultural experiences. The adolescent choice of foods was closely related to their concerns over identity, image and social belonging which aroused from the media and parental contribution in the home. In addition, Montgomery, Grier, Chester, and Dorfman (2011) have used a similar conceptual framework to study food marketing on the digital divide, targeting children and teenagers.

Summary

This chapter captured the theoretical framework on which this study was anchored. This chapter also presented the general and empirical literature from academic journal materials, newspaper articles, academic books and online journals, and resources. The literature was compiled based on the three objectives of the study. The first objective was to identify the factors influencing the use of media in seeking messages on healthy eating practices. The second objective was to establish whether media messages on healthy eating practices satisfy the nutrition needs of female postgraduate students, and the third objective was to find out the types of healthy eating messages which the media provides that promote healthy eating practices. In addition, it also provided a conceptual framework.

The following chapter captured the research methodology used for this study.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter highlighted the research methodology used for carrying out this study. The study employed survey research design which is descriptive in nature. It also applied stratified sampling technique and purposive sampling for selection of representative sample for the study. Finally, it has employed questionnaires as the data collection instrument which is used for quantitative approaches.

Research Design

This study used survey research design. Naveed (2013) defined survey research as the study of a segment or a sample of a specific population. Therefore, in this study, a sample was derived from a specific population of female postgraduate students of Daystar University, Nairobi. Babbie (2005) added that survey designs make use of questionnaires. The questionnaires designed consisted of open-ended and closed-ended questions. The questionnaires were typed and printed as hard copies to be administered to the respondents.

Babbie also added that a questionnaire is a data collection instrument designed to draw out information which was beneficial for analysis. Hence, this study made use of questionnaires in order to collect data from the respondents chosen for this study. Naveed (2013) found out that if statistical principles were adequately done, then generalizations would be made from the sample to the population with a certain degree of certainty or confidence. Babbie (2005) also argued that survey research is an exceptional vehicle for measuring attitudes, behaviors and orientation in a population.

Population

According to Bless, Higson-Smith and Kagee (2006), the population was the whole set of items or people under focus and enabled the researcher to determine some characteristics. This current study focused on female postgraduate students of Daystar University, Nairobi, which was the entire population in focus. According to the admissions office, female postgraduate students make up 70% of the total postgraduate students. Therefore, the total number of the female postgraduate students was 382, who were currently registered in June 2015 Semester. Mugenda and Mugenda (2003) noted that a population should be consistent with the purpose of a study and should be used in generalizing the results of the study. Therefore, the choice of female postgraduate students was consistent with the purpose of this study and it could also be used to generalize the results of the study.

Sample Size

Bryman (2004) stated that a sample is the part of a population that is selected for examination and it is a sub-set of a population. According to Mugenda and Mugenda (2003) the study employed the twenty percent (20%) rule for determining the required sample size as expressed for descriptive studies. This was important because it was sufficient for carrying out this research study.

Therefore, the formula is as follows:

n = the desired sample size of the population

$$n = 382 \times \frac{20}{100} = 76$$

Thus, the desired sample size = 76 female postgraduate students.

Also, Bless et al (2006) provide that the formula for calculating each stratum be as follows:

$$f = \frac{n}{N}$$

$$f = \frac{76}{382}$$

Each category of the population must be multiplied by this fraction to obtain the corresponding category of the sample. The results were as follows:

	Population	Sample
Postgraduate Programme	382	76
MA Child Development	35	7
MA Communication	125	25
MA Community Development	35	7
MA Counseling Psychology	40	8
MA Monitoring & Evaluation	30	6
Master of Business Administration (MBA)	117	23

Sampling Technique

This study mainly employed purposive sampling, a non-probability sampling technique to select the subjects of the study. To select the desired sample for this study, it was necessary to employ purposive sampling. This was because the items from the sample could be deliberately chosen to facilitate the study (Kothari, 2004). To achieve this, the subjects could only be identified using the snowball method, which is a type of

purposive sampling. Mugenda and Mugenda (2003) said that snowball assists in identifying initial subjects who possess the desired characteristics. After that, the initial subjects provided the names of other participants who have the relevant characteristics until the researcher obtains the desired number of participants in order to complete the research. Therefore, this study used snowballing to obtain the desired number of female postgraduate students who could represent the population. This method was appropriate for this study since the researcher did not know the students and the courses they pursued in their respective program areas.

The study required adequate representation of the sample from the various program areas and their different concentrations. Therefore, it made use of the stratified approach because it enabled the researcher to have a subgroup that represented all the 382 female postgraduate students in the 6 program areas. Gliner, Morgan and Leech (2009) mentioned that stratified sampling helps the researcher identify strata. Strata are those variables used to divide the population into segments. In this case, the program area of study was the stratum identified for this study and it included the six postgraduate programs offered at Daystar University, Nairobi. Kothari (2004) also added that stratified approach produces more reliable and detailed research results.

Sampling Procedure

The accessible population for this study was female postgraduate students who were from the six (6) program areas of study. They include the following postgraduate programs: Master of Arts in Child Development, Master of Arts in Communication, Master of Arts in Community Development, Master of Arts in Monitoring & Evaluation, Master of Arts in Counseling Psychology and Master of Business Administration.

The researcher employed purposive sampling to identify the initial participants who would name other participants until the desired number of 76 participants was obtained. The participants were identified through the snowballing method a type of purposive sampling technique. Therefore, the researcher identified the admissions' officer working at the Registrar's Office as the initial participant who named the Head of Department for Child Development, and then she named other three Heads of the Department running the Monitoring & Evaluation Department, Community Development Department, and the Counseling Psychology Department. They all identified and named the subject lecturers so that the researcher could obtain a sample of 7 female postgraduate students in Child Development, 7 respondents in Community Development, 8 respondents in Counseling Psychology and 6 respondents in Monitoring and Evaluation.

Moreover, the Registrar's Office also identified the Head of Department in charge of the MBA program who was able to name other lecturers teaching the various specializations such as Finance, Human Resource Management, Strategic Management and Marketing. In these mentioned specializations, the researcher obtained the desired sample size of 23 female postgraduate students. In addition, the Head of Department of Communication identified the administrative assistant who named three lecturers teaching Corporate, Electronic and Development classes. Therefore, the researcher obtained a representative sample of 25 female postgraduate students. Therefore, the questionnaires were administered to the 76 female postgraduate students in all areas of concentration

Data Collection Instruments

In this study, questionnaires were used as the data collection instrument appropriate for quantitative data. Quantitative research mainly involves the collection and analysis of data in its numeric form (Hughes, 2006). A quantitative approach was appropriate for this study because it enabled the researcher to control the sampling procedure and the design of the data collection tool represented by the questionnaire. Somekh and Lewin (2005) suggested that the researcher needs to identify and select a design that could be used in quantitative research. Therefore, the questionnaire was identified and selected as the ideal data collection instrument since it complemented the research design for this study and it could also be analyzed quantitatively.

The questionnaire was written in English and it consisted of open-ended and closed-ended questions. McBurney and White (2004) also indicated that open-ended type of questions allows the respondents to answer the entire questions and disclose the reasoning behind the answers indicated. It also assisted the researcher to realize something not anticipated while designing the questions. The writers also mention that closed-ended questions are easier to handle, with a large sample size during administration. They are also easy to code and analyze since they are in a directly usable form. The questionnaire was self-administered as print-outs to the named participants who were identified for this study

Pretesting

To be able to determine the clarity and ability of the questionnaire selected, pre-testing was necessary to test their consistency and reliability as data collection tools. Therefore, the researcher pre-tested the questionnaire by administering it to ten (10)

female postgraduate students from St. Paul's University, Nairobi campus. The town campus is currently running two postgraduate programs, that is, the Master of Development Studies and the Master of Business Administration. Babbie (2005) suggested that pre-testing was the surest protection against errors that might occur while designing the questions for the data collection tool in order to prevent ambiguous questions from arising. Thus, pretesting assisted in revising the questions that appeared confusing to the participants and it allowed for better framing of the questions.

Data Analysis Plan

Quantitative data was collected from the respondents. Mugenda (2008) argued that with proper data analysis, a researcher could transform data obtained in a scientific inquiry into knowledge after the interpretations have been given meaning. Data from the questionnaires were analyzed quantitatively to generate information that could be interpreted.

The quantitative data was coded and analyzed through the Statistical Package of Social Sciences (SPSS) version 20. Somekh and Lewin (2005: p.215) stated that "statistical methods consist of a wide range of tools and techniques that could be used to describe and interpret data that are quantitative in nature, meaning that they could be measured numerically." This study used descriptive statistics and applied correlation and tables to present the findings.

Ethical Considerations

A letter of permission to carry out the study was issued by the Thesis Coordination Office under the School of Communication, Language and Performing Arts situated in Daystar University, Nairobi Campus. It was presented to the National

Commission for Science, Technology and Innovation (NACOSTI) and a permit was issued to allow the researcher collect data from the female postgraduate students of Daystar University, Nairobi Campus. Creswell (2003) held that the participants have the right to volunteer or withdraw at any time so that they do not feel intimidated or compelled into participating in this study. Therefore, the respondents were not forced to participate.

Creswell (2003) suggested that to protect the anonymity of individuals and their roles in a research study could mean disassociating the respondents' names during coding to treat the respondents with respect and maintained their confidentiality. The researcher did not use research assistants to collect data but gathered data solely.

Summary

This chapter covered the research design, population, sample size and sampling techniques. It also covered the data collection instrument as well as the data analysis used in this study. Furthermore, the population of the study consisted of 382 female postgraduate students and a sample size of 76 respondents all from Daystar University, Nairobi Campus. The study employed purposive sampling technique and used questionnaires as the data collection instruments appropriate for the study. The questionnaires were pretested, and then analyzed using the Statistical Package of Social Science (SPSS) version 20. Finally, the researcher outlined ethical considerations.

The following chapter captures the data analysis, presentation and interpretation.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter presents data analysis and interpretation of the findings. The purpose of the study was to investigate the influence of media messages on healthy eating practices among female postgraduate students of Daystar University, Nairobi. Table 4.1 below indicated the response rate of respondents who answered the questionnaires. 93.83% were the successful responses received while 6.17% were the unsuccessful responses received after administering the questionnaires. Mugenda and Mugenda (2003) agree that a 50% response rate in relation to the size was appropriate to ensure accuracy and reduce bias. Therefore, 94% response was ideal given the size of 76 respondents.

Response Rate

The desired sample size of this study was 76 female postgraduate students. Therefore, the researcher administered 90 questionnaires to the respondents, however only 81 questionnaires were returned. According to Mugenda and Mugenda (2003), the explanation for the 14 added numbers of questionnaires was that a research should obtain as large a sample as possible to allow for sufficiency. Out of the 81 questionnaires, only 76 questionnaires were fully filled while 5 other questionnaires were either poorly or partially filled. The explanation for the 5 questionnaires which were either poorly or partially filled was that the respondents did not give attention to the question since they rushed through them due to their busy schedules.

Table 4.1: Response Rate

	Response	% Response
Successful response	76	93.83%
Unsuccessful response	5	6.17%

Key Findings

Factors Influencing the Use of Media Messages on Healthy Eating Practices

The respondents reported that age, gender and exposure to media were the factors that influenced their use of media in seeking messages on healthy eating practices. The majority of the respondents indicated that exposure to media (48.7%) was the most influential factor compared to gender factor (28.9%) and age factor (22.4%). These results were consistent with Avni's (2009) findings which highlighted media as the most important factor contributing to women's eating behavior change. The explanation given by the respondents was that media reached a wider range of people who brought forth solutions. However, Meti (2014) argued that media offers solutions to all universal questions and healthy eating practices are one of those solutions.

Moreover, 28.9% of the respondents indicated gender influenced their use of media in seeking messages on healthy eating practices. The explanation was that females are more selective about healthy foods compared to males. According to Dong's (2010) studies females were perceived to have more knowledge about healthy eating practices compared to males since they put an effort in searching for nutritional information. In addition, 22.4% of the respondents indicated that age influenced their use of media in seeking messages on healthy eating practices. The findings are similar to Beaudoin and

Hong's (2011) findings which showed that women who pursued postgraduate education aged 26-30 years mostly searched for nutritional information from the internet. In contrast, Ritland (2013) noted that certain media sources such as newspapers were frequently used by the highly educated, older postgraduate women.

Table 4.2: Factors Influencing the Use of Media Messages on Healthy Eating Practices

	Frequency	Percent	Valid Percent	Cumulative Percent
Age factor	17	22.4	22.4	22.4
gender factor	22	28.9	28.9	51.3
Exposure to media	37	48.7	48.7	100.0
Total	76	100.0	100.0	

Usefulness of Mass Media in Promoting Messages on Healthy Eating Practices

Usefulness of Television in Promoting Messages on Healthy Eating Practices

The respondents were asked to select the medium they thought could be most useful in promoting messages on healthy eating practices. The results indicate that 30.3%, as well as 39.5% of the respondents strongly agreed and agreed that television was useful in promoting messages on healthy eating practices. This was attributed to the fact that a good number of people had access to television especially in their homes. The results could be related to Bell, Berger and Townsend's (2003) studies that indicated that television was saturated with approximately 98% of food advertisements which made it popular with the masses since messages are usually intentional, focused and persuasive in nature.

In contrast, the results also indicated that 18.4% of the respondents neither agreed nor disagreed that television could be useful in promoting messages on healthy eating practices. This was consistent with Friedman et al.'s (2009) studies which showed how respondents were torn between one medium to another based on perceived value of information. Therefore, the respondents reported that they could not categorize television as a channel of communicating healthy eating practice messages since they were confused about its purpose.

Furthermore, 10.5% disagreed and 1.3% strongly disagreed on the usefulness of television in promoting messages on healthy eating practices. The finding was similar to Jade's (2009) findings which established that some women could only refer to print sources opposed to electronic sources because they could only access the print source due to availability, information and time.

Table 4.3: Usefulness of Television in Promoting Messages on Healthy Eating Practices

Usefulness of Television	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	23	30.3	30.3	30.3
Agree	30	39.5	39.5	69.7
Neither	14	18.4	18.4	88.2
Disagree	8	10.5	10.5	98.7
Strongly disagree	1	1.3	1.3	100.0
Total	76	100.0	100.0	

Usefulness of Radio in Promoting Messages on Healthy Eating Practices

The results state that 9.2% of the respondents strongly agreed while 32.9% agreed that radio was useful in promoting messages on healthy eating practices. The participants indicated that most homes have access to radio compared to television because it may be affordable. Based on Reger et al.'s (2002) studies radio communicated to a larger community which benefited from the messages on healthy eating and the people could adapt to the new eating behaviors. The respondents stated that the messages used for radio were simplified and understandable in nature.

In contrast 26.3% of the respondents selected neither to mean that they neither agreed nor disagreed that radio was useful in promoting messages on healthy eating practices. They stated that they were divided in their opinion about the usefulness of radio in promoting messages on healthy eating practices. According to Friedman et al. (2009) some respondents might have a liking for television compared to radio because they interacted with television more than radio. Therefore, they could not be in a position to give an opinion about the available messages on healthy eating practices.

Moreover, it was reported that 27.3% of the respondents disagreed on the usefulness of radio in promoting healthy eating practices. Another 3.9% of them strongly disagreed on the usefulness of radio in promoting messages on healthy eating practices. The explanation was that radio did not feature most among postgraduate women since they questioned its credibility in communicating messages on healthy eating practices. This happened because most radio shows was hosted by celebrities or radio presenter who were not specialized nutritionist. This finding was also similar to Jade's (2009)

observations which highlighted some audiences having a preference for print sources such as magazines and newspapers compared to electronic sources such as radio.

Table 4.4: Usefulness of Radio in Promoting Messages on Healthy Eating Practices

Usefulness of Radio	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	7	9.2	9.2	9.2
Agree	25	32.9	32.9	42.1
Neither	20	26.3	26.3	68.4
Disagree	21	27.6	27.6	96.1
Strongly agree	3	3.9	3.9	100.0
Total	76	100.0	100.0	

Usefulness of Newspapers in Promoting Messages on Healthy Eating Practices.

The results indicate that 18.4% of the respondents strongly agreed, as well as 36.8% of them agreed on the usefulness of newspapers in promoting messages about healthy eating practices. The respondents felt that newspapers captured investigative features about nutritional messages with specific target groups. These findings are consistent with Beaudoin and Hong's (2011) studies since newspapers were featured mostly among older, highly educated (postgraduate) women because the messages had an influence on their perception of weight gain and its control.

In addition, 32.9% neither agreed nor disagreed on the usefulness of newspapers in promoting healthy eating practice messages since they were confused and undecided on its usefulness. The reason was that different age groups respond differently to various types of media because of their orientation. The finding was similar to Jade's (2009) observations which showed younger university students making use of the internet for

nutritional benefits compared to older ones. Therefore, they did not interact with print sources as much as the older female students.

Besides, 11.8% of the respondents disagreed on the usefulness of newspapers in promoting messages on healthy eating practices. They felt that newspapers could not contain messages on healthy eating practices. This could be related to Ritland's (2013) observations which showed the difference in perception among different age groups. Some respondents stated that doctor-patient communication was far much useful to them compared to media interactions because face-to-face interaction provided them with reliable information.

Table 4.5: Usefulness of Newspapers in Promoting Messages on Healthy Eating Practices.

Usefulness of Newspapers	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	14	18.4	18.4	18.4
Agree	28	36.8	36.8	55.3
Neither	25	32.9	32.9	88.2
Disagree	9	11.8	11.8	100.0
Total	76	100.0	100.0	

Usefulness of Magazines in Promoting Messages on Healthy Eating Practices.

Table 4.6 shows that 32.9% of the respondents strongly agreed, as well as 42.1% of them agreed on the usefulness of magazines in promoting messages on healthy eating practices. Based on Cohen's (2006) studies women were more likely to compare themselves to what they read from magazines than men because women become emotionally attached to what they read in magazines compared to men.

In contrast 18.4% of the respondents selected neither to indicate that they neither agreed nor disagreed on the usefulness of magazines in promoting messages on healthy eating. The result were similar to Friedman et al.'s (2009) studies which revealed that most women would trust food commercial messages from television rather than magazines since they felt they were current and entertaining compared to magazines.

In addition, 3.9% of the respondents disagreed on the usefulness of magazines in promoting messages on healthy eating practices. As well, 2.6% strongly disagreed on the usefulness of magazines in promoting messages on healthy eating practices. The margin between the two findings was small. But the results showed that the respondents did not consider magazines to be useful in promoting messages on healthy eating practices. Based on Ritland's (2013) observations, doctor-patient communication appeared to be a more resourceful channel compared to media to some people. The participants felt that face-to-face interactions were significant to them compared to media interactions since they were reliable.

Table 4.6: Usefulness of Magazines in Promoting Messages on Healthy Eating Practices.

Usefulness of Magazines	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	25	32.9	32.9	32.9
Agree	32	42.1	42.1	75.0
Neither	14	18.4	18.4	93.4
Disagree	3	3.9	3.9	97.4
Strongly disagree	2	2.6	2.6	100.0
Total	76	100.0	100.0	

Usefulness of Internet in Promoting Messages on Healthy Eating Practices.

The results show that 42.1% of the respondents strongly agreed on the usefulness of internet in promoting messages on healthy eating practices. As well, 40.8% agreed on the usefulness of internet in promoting messages on healthy eating practices. The results are similar to Beaudoin and Hong's (2011) studies which expressed that internet were greatly used more than all other types of media. The respondents chose it as the primary source of health and nutrition information. They also indicated that women pursuing higher education at the postgraduate level were more inclined to seek for healthy eating messages from the internet. Meti (2014) attributed these findings to the respondents' ability to access laptops, computer labs and smart phones that assist them to have internet connectivity.

In addition, 11.8% of the respondents selected neither to indicate that they neither agreed nor disagreed on the usefulness of internet in promoting messages on healthy eating practices. The result was similar to Ritland's (2013) findings which showed that some older postgraduate women perceived print sources as reliable in relaying nutritional information compared to the internet. Therefore, they could not make a decision on whether internet was reliable or not reliable as far as nutritional matters were concerned.

In contrast 3.9% of the respondents strongly disagreed on the usefulness of internet in promoting messages on healthy eating practices. This was also followed by 1.3% of them disagreeing on the usefulness of the internet in promoting messages on healthy eating practices. These results were attributed to the fact that some respondents could not consider internet a chief source of nutritional information for healthy eating practices. Instead they found other types of media more useful than internet. These

findings are similar to Beaudoin and Hong (2011) findings that showed older, highly educated (postgraduate) women who found newspapers useful for seeking nutritional information compared to internet.

Table 4.7: Usefulness of Internet in Promoting Messages on Healthy Eating Practices

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	32	42.1	42.1	42.1
Agree	31	40.8	40.8	82.9
Neither	9	11.8	11.8	94.7
Disagree	3	3.9	3.9	98.7
Strongly disagree	1	1.3	1.3	100.0
Total	76	100.0	100.0	

Descriptive Statistics of Internet, Magazines, Television, Newspapers and Radio.

The findings have shown that a majority of the respondents strongly agreed on the usefulness of internet in promoting messages on healthy eating practices ($M=1.82$, $SD=0.890$). It was followed with magazines ($M=2.01$, $SD=0.959$) and television ($M=2.13$, $SD=1.011$). However, newspapers ($M=2.38$, $SD=0.923$) and radio ($M=2.84$, $SD=1.059$) were the least useful media in promoting messages on healthy eating practices

Table 4.8: *Descriptive Statistics of Internet, Magazines, Television, Newspapers and Radio.*

	N	Minimum	Maximum	Mean	Std. Deviation
Usefulness of internet in promotion of message.	76	1	5	1.82	.890
Usefulness of magazines in promotion of message.	76	1	5	2.01	.959
Usefulness of T.V in promotion of message.	76	1	5	2.13	1.011
Usefulness of newspapers in promotion of message.	76	1	4	2.38	.923
Usefulness of radio in promotion of message.	76	1	5	2.84	1.059
Valid N (list wise)	76				

The Satisfaction Derived from Media Messages on Healthy Eating Practices

The results show that 46.1% of the respondents strongly agreed that they found satisfaction from searching internet messages about healthy foods. Also, 36.8% of the respondents agreed that they found satisfaction from searching internet messages about healthy foods. These results were similar to Avni's (2009) findings whereby 38.7% of female university students interacted greatly with the internet. They connected to social media platforms such as Twitter and Facebook as they were searching for healthy eating messages and their perception was influenced with what they read. Meti (2014) attributed

this to the fact that they could access laptops, computer labs, and Smartphones which provided them with online connectivity.

Moreover, 10.5% of the respondents chose neither to mean that they neither agreed nor disagreed with the capability of the internet to satisfy their nutritional information needs. The findings were consistent with Ritland's (2013) and Beaudoin and Hong's (2011) studies which established that some female postgraduate students searched for nutritional foods messages from other media sources such as television or newspapers rather than to use internet. They could not perceive that internet could provide messages on healthy eating practices.

In addition, 3.9% of the respondents disagreed that they could find satisfaction from searching about healthy foods on the internet. It was followed by 2.6% of the respondents that strongly disagreed that they could find satisfaction from searching about healthy foods on the internet. These results were consistent with Ritland's (2013) findings which indicated that age differences could contribute to the lack of interest for female students in using the internet for nutritional purposes. The older female postgraduate students may disagree with the use of internet in searching for messages about healthy foods.

Table 4.9: Ranking the Satisfaction Acquired from Searching Internet Messages.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	35	46.1	46.1	46.1
Agree	28	36.8	36.8	82.9
Neither	8	10.5	10.5	93.4
Disagree	3	3.9	3.9	97.4
Strongly disagree	2	2.6	2.6	100.0
Total	76	100.0	100.0	

Ranking the Satisfaction Acquired from Watching Television Messages.

The results show that 26.3% of the respondents strongly agreed that they enjoyed watching advertised food messages on television. As well, 47.4% of the respondents agreed that they enjoyed watching advertised food messages on television. These findings were similar to Friedman et al.'s (2009) studies which showed that food commercial messages influenced the older people's healthy eating habits. They were able to follow a healthy eating regimen due to what they had watched on television. Jade (2009) attributes these results to the fact that television sets were found in many homes and a good number of people could watch television for an average of 3-4 hours daily.

Furthermore, 19.7% of the respondents selected neither to indicate that they neither agreed nor disagreed that they enjoyed watching advertised food messages on television. According to Bell, Berger and Townsend's (2003) investigations, these results could be attributed to the fact that television was saturated roughly 98% of food commercials. This made the television viewers confused since they could not filter out the healthy and unhealthy eating messages.

In contrast 3.9% of the respondents disagreed that they could enjoy the advertised food messages on television while 2.6% strongly disagreed that they could enjoy the advertised food messages on television. The reason was that the respondents could not establish whether the advertised food messages on television could produce positive healthy eating practices. The results were consistent with Harris and Bargh's (2009) studies which found that television portrayed a lot of negative messages like portraying obese women in negative light. This concluded that television had no business in creating positive eating habits among women.

Table 4.10: Ranking the Satisfaction Acquired from Watching Television Messages

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	20	26.3	26.3	26.3
Agree	36	47.4	47.4	73.7
Neither	15	19.7	19.7	93.4
Disagree	3	3.9	3.9	97.4
Strongly disagree	2	2.6	2.6	100.0
Total	76	100.0	100.0	

Ranking the Satisfaction Acquired from Radio and Television on Tips for Preparing Healthier Foods.

The findings showed that 17.1% of the respondents strongly agreed and 46.1% of them agreed that they got tips on preparing healthier foods in different ways through radio and television. These results were similar to Friedman et al.'s (2009) studies which showed that older women would prepare and incorporate fish into their diet daily because they got the knowledge from watching television and listening to the radio. Reger et al. (2002) attributed this to the fact that television and radio were commonly found in their homes, and the messages were crafted in a simplified and understandable manner.

In addition, 22.4% of the respondents chose neither to signify that they neither agreed nor disagreed that they could get tips on preparing healthier foods in different ways through radio and television. Jade (2009) attributed this to the different interests served by different types of media, for instance some respondents may not use radio or television in getting cooking tips but they would use newspapers or magazines.

In contrast 9.2% of the respondents disagreed together with 5.3% strongly disagreed that they could get tips on preparing healthier foods through radio and television. These results were similar to Avni's (2009) findings which established that

younger female university students interacted with electronic media such as television and the internet compared to older ones. This was because older university students could opt for print media like newspapers to obtain tips on preparing healthier foods while younger females got their tips through television and radio.

Table 4.11: Ranking the Satisfaction Acquired from Radio and Television

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	13	17.1	17.1	17.1
Agree	35	46.1	46.1	63.2
Neither	17	22.4	22.4	85.5
Disagree	7	9.2	9.2	94.7
Strongly disagree	4	5.3	5.3	100.0
Total	76	100.0	100.0	

Ranking the Satisfaction Acquired from Magazines/Newspapers covered on Recipes.

The findings indicate that 44.7% of the respondents strongly agreed that they enjoyed the recipe section covered in magazines/newspapers. As well, 38.2% of the respondents agreed that they enjoyed the recipe sections covered in magazines/newspapers. These findings are similar to Dong's (2010) studies which showed that out of 550 young female university students, 45% indicated that their motivation to lose weight was inspired through magazine messages that factored on the importance of eating healthy foods daily. The studies of Beaudoin and Hong (2011) also found that newspapers were featured mostly among older, highly educated (postgraduate) women. They could consume the messages to gain knowledge about weight control as they increased their consumption of healthy foods such as vegetables daily.

Besides, 14.5% of the respondents selected neither to indicate that they neither agreed nor disagreed that they could find satisfaction from the messages on recipe on

magazines/newspapers. The reason was they did not interact with the media. According to Friedman et al. (2009), some respondents found television informative since they could interact with it on a daily basis and thus influence their eating practices.

Additionally, 2.6% of the respondents strongly disagreed that they enjoyed the recipe section in magazines/newspapers because they were not oriented to the positive element of the mentioned sources of media. Van Vonderen and Kinnally (2012) attributed this finding to the negative perception held by respondents who claimed that magazines/newspapers portrayed women's bodies negatively causing readers to have negative images about their bodies which could result to poor eating habits.

Table 4.12: Ranking the Satisfaction Acquired from Magazines/Newspapers Covered on Recipes.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	34	44.7	44.7	44.7
Agree	29	38.2	38.2	82.9
Neither	11	14.5	14.5	97.4
Strongly disagree	2	2.6	2.6	100.0
Total	76	100.0	100.0	

Descriptive Statistics for the Satisfaction Acquired from Internet, Television, Radio, Magazine and Newspaper Messages.

These descriptive statistics indicated that the majority of the respondents strongly agreed that they enjoyed the recipe sections covered in magazines/ newspapers ($M=1.78$, $SD=0.888$). It was followed by those respondents that enjoyed searching for messages about healthy foods on the internet ($M=1.79$, $SD=0.957$). Likewise, those respondents that enjoyed watching advertised food messages on television ($M=2.09$, $SD=0.926$) and

those respondents that got tips on preparing healthier foods in different ways through radio and television ($M=2.39$, $SD=1.047$) were also represented.

Table 4. 13: Descriptive Statistics for the Satisfaction Acquired from Media Messages.

	N	Minimum	Maximum	Mean	Std. Deviation
Ranking the satisfaction from recipes on magazines / newspapers.	76	1	5	1.78	.888
Ranking the satisfaction from searching the internet.	76	1	5	1.79	.957
Ranking the satisfaction from watching Television.	76	1	5	2.09	.926
Ranking the satisfaction from getting tips on preparing food from radio and TV.	76	1	5	2.39	1.047
Valid N (list wise)	76				

Types of Healthy Eating Messages Searched from the Media.

A Spearman correlation test was used to determine if there was a relationship between the types of healthy eating messages, and the satisfaction achieved from watching advertised food messages through television. The test revealed that there was a positive correlation between the types of healthy eating messages, and the satisfaction acquired from watching advertised food messages on television. The test results are as follows $Rho(76) = 0.302$ $p, <.0.01$).

The respondents, who had chosen food advertisement as the type of healthy eating messages also enjoyed watching advertised food messages on television. The results were

similar to Harris and Bargh's (2009) findings which stated that watching advertised foods advertisement through television generally affects the perception of audiences as they would strive to adapt to the behaviors proposed in the viewed messages. They would either take up positive or negative eating practices that may result to a life practice in the long run. The results were similar to Friedman et al. (2009) findings which indicated total eating behavior change among older women of 40-60 years who were exposed to television commercials that encouraged them to eat healthy foods rich in proteins such as fish on a daily basis.

Table 4.14: Correlating the Types of Healthy Eating Messages and the Respondents Satisfaction

			Types of healthy eating messages searched on media	Ranking the satisfaction from watching advertised food messages on TV
Spearman's rho	Types of healthy eating messages searched on media	Correlation Coefficient	1.000	.302**
		Sig. (2-tailed)	.	.008
	Ranking the satisfaction from watching advertised food messages on TV	N	76	76
		Correlation Coefficient	.302**	1.000
		Sig. (2-tailed)	.008	.
		N	76	76

** . Correlation is significant at the 0.01 level (2-tailed).

Summary of Key Findings

This study obtained the following key findings: Firstly, the results showed that exposure to media, gender and age were the factors that influenced the use of media in seeking messages on healthy eating practices. 48.7% of the respondents indicated that exposure to media was the major factor influencing the use of media in seeking messages on healthy eating practices. It was followed by gender (28.9%) and age (22.4%).

Secondly, this study intended to reveal the usefulness of different types of media in promoting messages on healthy eating practices. The majority of the respondents strongly agreed on the usefulness of internet in promoting messages on healthy eating practices ($M=1.82$, $SD=0.890$). It was followed with magazines ($M=2.01$, $SD=0.959$) and television ($M=2.13$, $SD=1.011$). However, newspapers ($M=2.38$, $SD=0.923$), and radio ($M=2.84$, $SD=1.059$) were the least useful media in promoting messages on healthy eating practices.

Thirdly, this study intended to establish whether media messages on healthy eating practices satisfy the nutritional information needs of female postgraduate students. The majority of the respondents strongly agreed that they enjoyed the recipe sections covered in magazines/ newspapers ($M=1.78$, $SD=0.888$). Next was those who enjoyed searching for messages about healthy foods on the internet ($M=1.79$, $SD=0.957$). Followed by those respondents who enjoyed watching advertised food messages on television ($M=2.09$, $SD=0.926$) and those respondents that got tips on preparing healthier foods in different ways through radio and television ($M=2.39$, $SD=1.047$).

Fourthly, a Spearman correlation test was conducted and it showed a positive correlation between the types of healthy eating messages, and the satisfaction acquired from watching advertised food messages through television $Rho(76) = 0.302$ $p, < 0.01$).

The following chapter presents the summary of the findings and gives conclusions. It also provides the recommendations and the areas for further research.

Daystar university

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of findings based on the influence of media messages on healthy eating practices among female postgraduate students of Daystar University, Nairobi. It discusses the key findings in light of the objectives of this study. It also presents conclusions and recommendations of the findings as well as suggestions of possible areas of further research.

This study set out to meet three objectives: To identify the factors influencing the use of media for seeking messages on healthy eating practices. To establish whether media messages on healthy eating practices satisfy the nutritional information needs of female postgraduate students. To find out the types of healthy eating messages, which the media provides that, promote healthy eating practices.

Discussions of the Findings

Objective 1: The factors influencing the use of media for seeking messages on healthy eating practices.

48.7% of the respondents indicated that exposure to media influenced their use of media in seeking messages on healthy eating practices. These results were consistent with Avni's (2009) findings which highlighted media as the most important factor contributing to women's eating behavior change. The explanation given by the respondents was that media reached a wider range of people who brought forth solutions. However, Meti (2014) argued that media offers solutions to all universal questions and healthy eating practices were one of those solutions.

Moreover, 28.9% of the respondents indicated gender influenced their use of media in seeking messages on healthy eating practices. The explanation was that females are more selective about healthy foods compared to males. According to Dong's (2010) studies females were perceived to have more knowledge about healthy eating practices compared to males since they had put an effort in searching for nutritional information. In addition, 22.4% of the respondents indicated that age influenced their use of media in seeking messages on healthy eating practices. The findings are similar to Beaudoin and Hong's (2011) findings which showed that women who pursued postgraduate education aged 26-30 years mostly searched for nutritional information from the internet. In contrast, Ritland (2013) noted that certain media sources such as newspapers were frequently used by the highly educated, older postgraduate women.

In addition, there was need to find out the usefulness of the different types of media in promoting messages on healthy eating practices. The majority of the respondents strongly agreed on the usefulness of internet in promoting messages on healthy eating practices ($M=1.82$, $SD=0.890$). It was followed with magazines ($M=2.01$, $SD=0.959$) and television ($M=2.13$, $SD=1.011$). However, newspapers ($M=2.38$, $SD=0.923$), and radio ($M=2.84$, $SD=1.059$) were the least useful media in promoting messages on healthy eating practices. The results are similar to Beaudoin and Hong's (2011) studies which expressed that internet were greatly used more than all other types of media. The respondents chose it as the primary source of health and nutrition information. They also indicated that women pursuing higher education at the postgraduate level were more inclined to seek for healthy eating messages from the internet. Meti (2014) attributed these findings to the respondents' ability to access

laptops, computer labs and smart phones that assisted them to have internet connectivity. On the other hand, magazines were also chosen as useful medium in promoting messages on healthy eating practices. These results were similar to Cohen's (2006) studies which indicated that women were more likely to compare themselves to what they read from magazines than men because women become emotionally attached to what they read in magazines compared to men.

Moreover, the respondents strongly agreed on the usefulness of television in promoting messages on healthy eating practices since most of the respondents had access to television in their homes. The findings could be related to Bell, Berger and Townsend's (2003) studies that indicated that television was saturated with approximately 98% of food advertisements which made it popular with the masses since messages are usually intentional, focused and persuasive in nature.

In contrast, newspapers and radio were the least useful in promoting messages on healthy eating practices since not so many respondents used them for searching on this matter. These findings are consistent with Beaudoin and Hong's (2011) studies since newspapers were featured mostly among older, highly educated (postgraduate) women because the messages had an influence on their perception of weight gain and its control. On the contrary, radio did not feature most among postgraduate women since its credibility in communicating messages on healthy eating practices was questionable. Reger et al. (2002) attributed this to the fact that radio messages were usually crafted in a simplified and understandable manner to reach a wider mass, including the uneducated.

These findings indicated that there were factors influencing the use of media in seeking messages on healthy eating practices. The majority chose exposure to media to be the highest compared to gender and age. These factors were complementing the intervening variables described in this study's conceptual framework. This was because they explained the relationship between the independent variable (media messages) and dependent variable (healthy eating practices). In this study, the intervening variables were the factors that influenced the chosen media.

Objective 2: To establish whether media messages on healthy eating practices, satisfy the nutritional information needs of female postgraduate students.

This study also intended to establish whether media messages on healthy eating practices satisfy the nutritional information needs of female postgraduate students. The majority of the respondents strongly agreed that they enjoyed the recipe sections covered in magazines/ newspapers ($M=1.78$, $SD=0.888$). Next was those who enjoyed searching for messages about healthy foods on the internet ($M=1.79$, $SD=0.957$). Followed by those respondents who enjoyed watching advertised food messages on television ($M=2.09$, $SD=0.926$) and those respondents that got tips on preparing healthier foods in different ways through radio and television ($M=2.39$, $SD=1.047$). These findings are similar to Dong's (2010) studies which showed that out of 550 young female university students, 45% indicated that their motivation to lose weight was inspired through magazine messages that factored on the importance of eating healthy foods daily. The studies of Beaudoin and Hong (2011) also found that newspapers were featured mostly among older, highly educated (postgraduate) women. They could consume the messages to gain

knowledge about weight control as they increased their consumption of healthy foods such as vegetables daily.

The internet followed as one that gave the respondents satisfaction while searching for messages about healthy foods. These results were similar to Avni's (2009) findings whereby 38.7% of female university students interacted greatly with the internet. They connected to social media platforms such as Twitter and Facebook as they were searching for healthy eating messages and their perception was influenced with what they read. Meti (2014) attributed this to the fact that they could access laptops, computer labs, and Smartphones which provided them with online connectivity.

The respondents stated that they enjoyed watching messages on advertised foods through television. These findings were similar to Friedman et al.'s (2009) studies which showed that food commercial messages influenced the older people's healthy eating habits. They were able to follow a healthy eating regimen due to what they had watched on television. Jade (2009) attributed these results to the fact that television sets were found in many homes and a good number of people could watch television for an average of 3-4 hours daily. In addition, the respondents chose both radio and television since they indicated that it gave them tips on preparing healthy food in different ways. These results were similar to Friedman et al.'s (2009) studies which showed that older women would prepare and incorporate fish into their diet daily because they got the knowledge from watching television and listening to the radio. Reger et al. (2002) attributed this to the fact that television and radio were commonly found in their homes, and the messages were crafted in a simplified and understandable manner.

From a theoretical perspective, this study was guided by the “Uses and Gratification Theory.” According to Luo (2002), the theory explained the audience motivation and related it to the associated behaviors that were accompanied by the use of media. Therefore, these findings support the theory in that the respondents found the motivation of interacting with a certain medium in order to satisfy their healthy eating practice needs. The respondents highlighted that magazines/newspapers provided them with the most satisfaction compared to internet, television and radio.

Objective 3: Types of healthy eating messages, which the media provides that, promote healthy eating practices.

A Spearman correlation analysis test was carried out to find out whether there was a relationship between the types of healthy eating messages and the satisfaction acquired from the media messages. The findings indicated a positive correlation between the types of healthy eating messages and the satisfaction acquired by respondents’ while watching advertised food messages through television. The results were as follows; $Rho(76) = 0.302$ $p, <.0.01$). In this study, the types of healthy eating messages included; food advertisement, healthy eating messages covering on healthy foods for the brain, and healthy eating messages on weight loss. Similarly, Friedman et al. (2009) stated that specific types of healthy eating media messages yielded better results and could potentially produce sustained practices or behaviors. Previous studies carried out by Harris and Bargh, (2009) established that most of the healthy eating messages appeared as advertised food messages through the media which propagated certain eating practices for the benefit of brain health and productive weight loss. Bell

et al. (2003) also affirmed that almost 98% of advertisements on television focused majorly on eating food and nutrition matters. The explanation was that advertised food messages were usually intentional, focused and persuasive in nature, and they could influence behaviors or practices.

Luo (2002) outlined three components that made up the “Uses and Gratification” theory namely; antecedents, attitude, and the possible consequences. The antecedents stood for the entertainment and informational value. The attitude signified the attitude towards the medium and the possible consequences stood for satisfaction or gratification received. The findings indicated that the respondents were informed and they enjoyed watching food advertisement messages which are featured on television.

Conclusions

The purpose of this study was to investigate the influence of media messages on healthy eating practices among female postgraduate students of Daystar University, Nairobi. Three conclusions were derived from the study. Firstly, the respondents indicated that exposure to media, gender and age were the factors that influenced the use of media in seeking messages on healthy eating practices. However, the majority indicated that exposure to media influenced them greatly compared to gender and age. In addition, this study also established the usefulness of media in promoting messages on healthy eating practices, with the majority of the respondents having strongly agreed that internet was useful in promoting messages on healthy eating practices. It was followed by magazines, television, newspapers and radio respectively.

Secondly, this study also established that media messages on healthy eating practices satisfied the nutritional information needs of female postgraduate students. The

majority of the respondents strongly agreed that they enjoyed the recipe sections covered in magazines/ newspapers. In addition, some of the respondents enjoyed searching for messages about healthy foods on the internet while others enjoyed watching advertised food messages on television. Likewise, the results also indicated that some respondents got tips on preparing healthier foods in different ways through radio and television.

Thirdly, this study established that there was a relationship between the types of healthy eating messages and the satisfaction acquired from watching advertised food messages on television. A Spearman correlation analysis indicated a positive correlation. In other words, the respondents found gratification from watching healthy eating messages, which were advertised on television.

According to Avni (2009) internet use in the United States of America had greatly contributed to healthy eating practices with at least 40% of females in universities actively interacting with the medium. Nonetheless, interventions designed for social networking platforms are very significant because they give specific and consistent information about healthy eating practices. Similarly, Beaudoin and Hong (2011) found out that internet was frequently used more than all other types of media because it was perceived to be a primary source of health and nutrition information. They also discovered that women pursuing higher education at the postgraduate level were more inclined to seek for healthy eating practice messages through the internet.

Elsewhere, it was observed that the majority of the respondents found satisfaction from reading magazines or newspapers. According to Dong's (2010) studies which showed that out of 550 young female students 45% indicated that their motivation to lose weight was inspired through magazine messages that factored on the importance of eating

healthy foods daily. Related studies by Beaudoin and Hong (2011) also found that newspapers were featured mostly among older, highly educated (postgraduate) women. Internet came second in the list with a considerable number of postgraduate students indicating that they enjoyed searching for messages on healthy foods using the internet.

Recommendations

This study recommends that media messages on healthy eating practices should be encouraged since they have various uses and gratifications. Not only do media messages on healthy eating encourage the practice, but also captivate the audience with appealing messages on healthier food through advertisements. Therefore, the findings indicated that exposure to media had the highest response compared to gender and age. This was because the respondents indicated that it influenced their use media in seeking messages on healthy eating practices. Hence, health communicators and journalists ought to develop messages and use the media to disseminate the messages so as to motivate healthier eating practices among female postgraduate students.

Secondly, since the majority of the respondents indicated that internet was useful in promoting messages about healthy eating practices, the Government of Kenya, in collaboration with food companies, may use the internet to educate and inform the public on the issues of healthy eating practices. Moreover, they could also use social networking sites like Facebook and Twitter to pass the messages on healthy eating practices to such respondents. Thus, food companies could make healthy eating practice messages available to them using these platforms.

Thirdly, since a relationship exists between the types of healthy eating messages and the satisfaction acquired from watching advertised food messages through television,

marketing companies may use television to advertise their healthy food products. It is highly likely that healthy food products may be more acceptable to those watching healthy eating messages through television.

Areas of Further Research

Future research may look into exploring the satisfaction obtained from using the internet as a means of communicating messages on healthy eating practices. The research could also look into reviewing and analyzing the content of healthy eating practices obtained from the magazines/ and newspapers.

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APPENDICES

Appendix A: Questionnaire

Hello,

My name is Naomi Kahiga, a MA (Communication) student at Daystar University, Nairobi. I am carrying out a study whose purpose is to investigate the influence of media messages on healthy eating practices among female postgraduate students of Daystar University, Nairobi.

TERMS OF PARTICIPATION: I understand that my participation in this project is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled. I verify that my selection of “continue” below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described. If I select “discontinue,” I do not accept to consent to the terms of this study.

- 1) Continue ☐
- 2) Discontinue ☐

To be filled and submitted by July 27th, 2015

A: GENERAL INFORMATION

Section One

1) What is your program area of study? *(Tick one of the choices)*

1. Master of Arts in Child Development [☐]
2. Master of Arts in Communication [☐]
3. Master of Arts in Community Development [☐]
4. Master of Arts in Counselling Psychology [☐]
5. Master of Arts in Monitoring & Evaluation [☐]
6. Master of Business Administration [☐]

2) According to your choice in question (1), what is your area of specialization?

.....
.....

3) What is your age?

1. 20-24 [☐]
2. 25-29 [☐]
3. 30-34 [☐]
4. 35-39 [☐]
5. 40-44 [☐]
6. 45-49 [☐]
7. 50 and above [☐]

B: DETAILED INFORMATION:**Section Two**

- 1) In your own opinion, what do you think is the major factor affecting the use of media in seeking messages on healthy eating practices? (*Please select one response*)

1. Age factor []
 2. Gender []
 3. Media exposure []

- 2) From your response to question (1) above, what is the reason for your response?

.....

- 3) From the following list of mass media, rank it's usefulness in promoting messages on healthy eating practices? On a scale of 1-5, choose the level of agreement; with 1-Strongly agree; 2- Agree; 3-Neither; 4-Disagree; 5-Strongly disagree (*Circle one each*).

	Sources of media message	Strongly agree ← → Strongly disagree				
1.	Television	1	2	3	4	5
2.	Radio	1	2	3	4	5
3.	Newspapers	1	2	3	4	5
4.	Magazines	1	2	3	4	5
5.	Internet	1	2	3	4	5

- 4) Based on your responses to question (3) above, what could be the reason for your choice(s)?

.....

.....

.....

5) How often do you use the chosen mass media which provides messages that promote healthy eating practices? (Tick one from the list/state any other)

1. Never []
 2. Once in a week []
 3. Every day []
 4. Once in a month []
 5. Any other response
-

6) What is the reason for your answer to question (5) above?

.....

.....

7) Why should media messages on healthy eating practices be specifically designed for the female postgraduate students? (*provide your reason*)

.....

.....

.....

Section Three

8) Rank your agreements with the following statements using the scale below:

What satisfaction do you derive from media messages on healthy eating practices?	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
1. I enjoy searching about healthy foods from the internet.					
2. I enjoy watching media messages about advertised foods on TV.					
3. I get a lot of tips on preparing healthier food in different ways from radio and TV.					
4. I enjoy the recipe sections covered by magazines /newspapers.					

9) What are the reasons for your answers to question (8) above?

.....

.....

.....

.....

Section Four

10) What types of healthy eating messages do you seek from the media? (*Provide one response*)

1. Food advertisement []
2. Healthy eating messages on brain health []
3. Healthy eating messages on weight loss and obesity []

11) Based on your response to question (9) above, do you think that healthy eating messages could promote healthy eating practices among the female postgraduate students?

.....

.....



.....


Thank you for your time and your cooperation!

Appendix B: NACOSTI Research Permit

THIS IS TO CERTIFY THAT:
MISS. NAOMI WARIGIA KAHIGA
of DAYSTAR UNIVERSITY, 0-200
Nairobi, has been permitted to conduct
research in Nairobi County
on the topic: EFFECT OF MEDIA
MESSAGES ON HEALTHY EATING
PRACTICES AMONG COLLEGE WOMEN: A
SURVEY OF RESPONSES TO CLINICAL
NUTRITIONIST SONA PARMAR
MUKHERJEE'S HEALTH AND NUTRITION
ARTICLES
for the period ending:
12th November, 2016

Permit No : NACOSTI/P/15/6341/8706
Date Of Issue : 13th November, 2015
Fee Relieved :Ksh 500



Applicant's Signature


Director General
National Commission for Science,
Technology & Innovation

Day